2:30 p.m.

823-3 Effect of Intravenous Glycoprotein IIb/IIIa Receptor Antagonists on Survival in Percutaneous Coronary Interventions: A Meta-Analysis

Evangelia Karvouni, Demosthenes G. Katritsis, John P. Ioannidis, Athens Euroclinic, Athens, Greece, University of Ioannina School of Medicine, Ioannina, Greece

Background. Several randomized trials have shown that intravenous antagonists of the platelet glycoprotein IIb/IIIa receptor reduce the incidence of myocardial infarction (MI), and composite cardiac outcomes (death, MI or revascularization) in patients undergoing percutaneous coronary intervention (PCI). However, individual studies have not had adequate power to examine differences in mortality.
Methods: We performed a meta-analysis of 19 randomized placebo-controlled trials (20 comparisons, n=20,137) of intravenous glycoprotein IIb/IIIa receptor antagonists in patients undergoing PCI. Death was the primary outcome.
Results: Mortality was significantly reduced at 30 days (risk ratio [RR] 0.69 [95% CI, 0.53-0.90]), 6 months (RR 0.79 [95% CI, 0.64-0.97]), and including longer follow-up (RR 0.79 [95% CI, 0.66-0.94]) with no significant between-study heterogeneity. The relative risk reduction was largely similar in trials on patients with or without acute MI; in trials continuing or discontinuing heparin after the procedure; and in trials using stents or other PCI as the intended primary procedure. At 30 days and 6 months, MI and composite outcomes were significantly reduced ($P<0.001$ for all). Major bleeding was significantly increased only in trials where heparin infusion was continued after the procedure (RR 1.70 [95% CI, 1.36-2.14]), while there was no excess bleeding when heparin was discontinued (RR 1.02 [95% CI, 0.85-1.24]).
Conclusion: In patients undergoing PCI, glycoprotein IIb/IIIa receptor antagonists confer a significant, and sustained decrease in the risk of death.

2:45 p.m.

823-4 Prior Treatment With Statins Decreases Cardiac Biomarker Rise in Patients Undergoing Percutaneous Coronary Interventions

Sean Halligan, Joerg Hermann, Ryan Lennon, Geralyn Pumper, Stuart Higano, Verghese Mathew, David R. Holmes, Jr., Amir Lerman, Mayo Clinic-Rochester, Rochester, MN

Background: Statins have been shown to reduce primary and secondary cardiac events in patients with coronary artery disease. However, it is unclear what the mechanism is for this benefit in patients undergoing precutaneous coronary intervention (PCI); we sought to determine if statins reduce the post-PCI rise in cardiac biomarkers and postulated that this may be one mechanism for the observed benefit.
Methods: We reviewed 1498 patents from the Mayo Clinic Interventional Registry who underwent PCI during the years 2000 and 2001. Patients with recent myocardial infarction, shock, chronic renal disease or pre-procedural cardiac biomarker elevation were excluded. Patients were separated into two groups, Group 1 (n=752) consisted of patients on statins and Group 2 (n= 746) of patients not on statins prior to PCI.
Results: Prior to adjustment for baseline differences, Group 1 patients had a significantly lower rate of cardiac biomarker elevation post-PCI compared to Group 2 patients (n= 200 (27%) vs. n=236 (32%), p= 0.03). After adjusting for baseline differences, there were significantly fewer elevations in Troponin T levels (p=0.049) and a trend towards fewer elevations of any cardiac enzymes (p=0.056) post-procedure in Group 1. At follow up, unadjusted Kaplan-Meier curves indicate a significantly lower rate of death or myocardial infarction in Group 1 patients (p=0.012).
Conclusions: In this retrospective study, patients on statin therapy prior to PCI had a lower rise in cardiac biomarkers than those not on statin therapy. This maybe a mechanism for the cardiovascular benefits seen in patients on statins undergoing PCI.

3:00 p.m.

823-5 Clopidogrel Pretreatment Reduces Platelet Inflammatory Marker Expression in Patients Undergoing Percutaneous Coronary Intervention

Frank J. Zidar, Martin J. Quinn, Deepak L. Bhatt, Deepak P. Vivekananthan, Herbert D. Aronow, Stephen G. Ellis, Edward Plow, Eric J. Topol, The Cleveland Clinic Foundation, Cleveland, OH

Background: Inflammation is thought to play an important role in the pathogenesis of complications after percutaneous coronary intervention (PCI). Pretreatment with the platelet ADP receptor antagonist clopidogrel reduces ischemic complications after PCI. We examined the effect of clopidogrel pretreatment (>24 hours) on platelet inflammatory marker expression after PCI.
Methods: Patients undergoing elective PCI at the Cleveland Clinic were recruited into the study. Platelet and serum expression of the inflammatory markers CD40L and CD62P were compared in patients pretreated or not pretreated with clopidogrel. Blood was drawn before and after PCI. Platelet CD40L and CD62P expression in ADP (30 μM) and TRAP (5μM) activated samples were quantified by flow cytometry. Results are presented as the geometric mean fluorescence intensity of the platelet population minus the fluoresence of isotypic control antibody. Soluble CD40L levels were determined by ELISA.
Results: Complete data was available on 71 patients. 30 (42%) were pretreated with clopidogrel for a median of 5 days. Mean age was 68±11 years, 75% were male.

Preprocedure	no pre-rx	clop. pre-rx	p value
CD40L (ADP)	2.72	1.74	p = .11
CD40L (TRAP)	5.18	4.06	p = .42
CD62P (ADP)	196.01	75.71	p = .0003
CD62P (TRAP)	274.51	166.00	p = .024
soluble CD40L	1.21	1.08	p = .85
Postprocedure			
CD40L (ADP)	2.75	1.26	p = .14
CD40L (TRAP)	4.50	1.79	p = .019
CD62P (ADP)	141.17	57.71	p = .0002
CD62P (TRAP)	208.84	135.17	p = .055
soluble CD40L	0.17	0.10	p = .028

Conclusions: Clopidogrel pretreatment reduces platelet inflammatory marker expression, specifically CD62P, prior to and immediately after PCI. Pretreatment may also decrease levels of soluble CD40 after PCI. In addition to the known anti-platelet activity of clopidogrel, these anti-inflammatory effects may explain part of the clinical benefit of a clopidogrel pretreatment strategy.

3:15 p.m.

823-6 Benefit of Clopidogrel in Patients Undergoing Percutaneous Coronary Intervention in the CURE Trial Receiving and Not Receiving an Intracoronary Stent

Shamir R. Mehta, Madhu K. Natarajan, Thomas Wittlinger, Joao Morais, Matyas Keltai, Hans-Jurgen Rupprecht, Michel E. Bertrand, Keith A. Fox, Salim Yusuf, McMaster University, Hamilton, ON, Canada

Background: It is well established that patients undergoing percutaneous coronary intervention (PCI) receiving a stent benefit from treatment with clopidogrel, in addition to aspirin. In certain situations, it may not be possible to insert a stent. This analysis explores the consistency of benefit with clopidogrel in those patients treated with and without a stent.
Methods: In the CURE trial, patients were randomized to receive clopidogrel 300 mg loading dose, followed by 75 mg a day for up to one year or matching placebo, in addition to aspirin. The 2,552 patients undergoing PCI in the trial were divided into 2 groups: those receiving a stent and those not receiving a stent. Outcome events, cardiovascular (CV) death or myocardial infarction (MI), were analyzed in these groups to determine if there was consistency of benefit with clopidogrel.
Results: Overall, among the 2,552 patients undergoing PCI in the CURE study, there was a significant reduction in CV death or MI with clopidogrel compared with placebo (relative risk reduction 31%, P=0.002). 486 patients did not receive an intracoronary stent (253 placebo and 233 clopidogrel) and 2066 received at least one stent (1092 placebo and 1080 clopidogrel). Clopidogrel was beneficial both in those not receiving a stent (RRR 44%, P=0.028) and in those receiving a stent (RRR 27%, P=0.020) (Table).
Conclusion: In patients with ACS undergoing PCI, clopidogrel is beneficial in those treated with a stent, and in those receiving balloon angioplasty alone.

CV death or MI from randomization to end (up to 1 year)

Group	Placebo	Clopidogrel	Relative Risk	95% CI	P value
All patients	169/1345 (12.6%)	116/1313 (8.8%)	0.69	0.54-0.87	0.002
No Stent	41/253 (16.2%)	22/233 (9.4%)	0.56	0.34-0.95	0.028
Stent	128/1092 (11.7%)	94/1080 (8.7%)	0.73	0.56-0.95	0.020

POSTER SESSION

1127 Percutaneous Coronary Intervention and Outcomes

Monday, March 31, 2003, 3:00 p.m.-5:00 p.m.
McCormick Place, Hall A
Presentation Hour: 3:00 p.m.-4:00 p.m.

1127-187 The French Registry of Left Main Coronary Artery Treatment: Preliminary Results

Marc Silvestri, Thierry Lefèvre, Pierre Labrunie, Khalife Khalife, G. Bayet, Marie-Claude Morice, M. Bedossa, A. Chmait, On behalf of the FLM Registry Investigators, UCV, Marseille, France, Institut Cardiovasculaire Paris Sud, Massy, France

Background: CABG is the established treatment for unprotected left main coronary artery lesions (LMCA). However, PCI is now proposed as an alternative
Methods: A prospective registry was set-up in 11 high-volume French centers during 13 months to evaluate the outcome of pts with LMCA.